

Application Serial Number 10/511,479  
Response to Office Action  
Dated

### 1. Amendments to the Specification

Kindly replace the paragraph beginning at page 9, line 17, with the following amended paragraph:

Clearly, when the output capacity  $C_{buffer}$  of the charge pump is heavily loaded, the present embodiment helps to alleviate the effort. The improvement has been examined in several experiments. In particular, the effect of the improvement has been simulated with a charge pump device with five stages, i.e. 6 charge pumps, for which the 1<sup>st</sup> stage has merely been used as outlined in FIG. 2b to increase the equivalent capacitance of stage two or a higher stage in the cascade. The result of the simulation proved that a preferred embodiment 1b is able to achieve the same voltage within seven clock cycles, as compared to eight clock cycles needed by a conventional device 1a of FIG. 2a. One cycle less is needed by a preferred embodiment. If one considers the load current  $I_{load}$  required in order to achieve the same voltage with the prior art approach of FIG. [[1a]]1 and the outlined approach of the preferred embodiment of FIGS. 2b and 2c of merely improving the first stage in the cascade, the improvement amounts to 12.5% in the current capability. Consequently the prior art charge pump would give 12.5% less current for the same voltage. In other words, a conventional device would take 12.5% more time to recover from a large peak of current absorbed by the load.